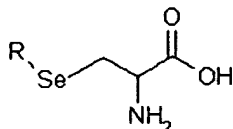


Claims

- [c1] A process for manufacturing L-Se-methylselenocysteine by reaction of chloroalanine methyl ester hydrochloride or chloroalanine hydrochloride or chloroalanine with methylselenol or its salts, acidifying the reaction mixture after completion of reaction, isolating methylselenocysteine hydrochloride as methanol solution, neutralizing the methanol solution with an amine such as triethyl amine to precipitate L-Se-methylselenocysteine
- [c2] A process as claimed in claim 1 wherein the reaction is conducted under an inert atmosphere of nitrogen or argon
- [c3] A process as claimed in Claims 1 & 2 wherein methylselenol or its salt is produced by reaction of dimethyldiselenide is reduced with a reducing agent chosen from sodium borohydride or hypophosphorous acid
- [c4] A process as claimed in claims 1, 2 & 3 wherein dimethyldiselenide is reduced at temperature range of 0^o to +60^o C, preferably between 0^o to +10^o C when sodium borohydride is used and preferably between 20^o to +40^o C when hypophosphorous is used
- [c5] A process as claimed in Claims 1, 2, 3 & 4 wherein methylselenol or methylselenide salt is reacted with chloroalanine methyl ester hydrochloride or chloroalanine hydrochloride or chloroalanine at the temperature range of 0^o to +50^o C, preferably between 30^o to +40^o C
- [c6] A process as claimed in Claims 1, 2, 3, 4 & 5 wherein the solvent employed is a mixture of dimethylformamide and water
- [c7] A process as claimed in Claims 1, 2, 3, 4 & 5 wherein the solvent employed is a mixture of acetonitrile and water
- ✓
[c8] A process for manufacturing DL-Se-methylselenocysteine wherein L-Se-methylselenocysteine or D-Se-methylselenocysteine is racemized in acetic acid using an aromatic aldehyde such as benzaldehyde
- ✓
[c9] A process for manufacturing L-Se-alkylselenocysteine, L-Se-allylselenocysteine,

L-Se-arylselenocysteine represented by the following formula



wherein R = C₁-C₈ alkyl groups (normal and branched) or

R = allyl group (-CH₂-CH=CH₂)

R = C₆H₅ or X-C₆H₄- (X being alkyl, halo)

by reacting chloroalanine methyl ester hydrochloride or chloroalanine hydrochloride or chloroalanine with appropriate alkylselenol or allylselenol or arylselenol or their salts

[c10] A process as claimed in claim 9 wherein alkylselenol or allylselenol or arylselenol is generated by the reduction of the corresponding diselenide with a reducing agent chosen from sodium borohydride or hypophosphorous acid

[c11] ✓ A process for the manufacture of Chloroalanine methyl ester hydrochloride from L-Serine methyl ester hydro chloride using thionyl chloride